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ABSTRACT

This statistical report reviews Massachusetts Title I projects in terms of: the population served; participating schools; amounts of staff training, community and parental involvement; and effects of the programs on educational achievement. The format is largely tables and figures interspersed with textual presentation of the same data. Title I basic statistics include: community participation, allocations by county, number of projects, student participation by grade level, type of staff and project academic activities. Private as well as public school students in Title I projects are also enumerated, the former amounting to nearly 20 percent of those reported. Guidelines for such schools are presented. Funding of and participation in staff training programs, topics covered, and characteristics of training personnel are also reviewed. Community and parent involvement are reported to have been high, over 97% of the Title I projects having active Parent Advisory Councils. Achievement scores show a slightly higher gain in reading and significantly higher gain in mathematics among Title I students than among non Title I participants. (Author/KR)

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EVALUATION REPORT FY76

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Massachusetts Title I Basic Statistics

PARTICIPATION OF MASSACHUSETTS COMMUNITIES

Title I served a substantial number of educationally disadvantaged children throughout the Commonwealth of Massachusetts during fiscal year 1976 (FY76).

Of the 351 towns and cities in Massachusetts, 97.7% (343 communities) received entitlement to operate compensatory education programs for FY76. A small percentage of the communities, 5.4% (19 communities), did not apply for their entitlement. However, 94.6% (332 communities) of those eligible applied for and received their entitlement. **(see table 1)**

TABLE 1

PARTICIPATION OF CITIES AND TOWNS IN TITLE I

	Number	Percentage
Received Entitlement	343	97.7
Have no Entitlement	8	2.3
Applied for Entitlement	332	94.6
Did Not Apply for Entitlement	19	5.4

ALLOCATIONS BY COUNTY

Allocation to each county (excluding homes and institutions) is based on the number of low-income children, ages 5-17, in the county. Approximately 27% of the state's total grant is earmarked for Suffolk County—Boston, Chelsea, Revere, and Winthrop. The amount of Title I money allocated to each respective county in the Commonwealth is shown below.

County	*Amount*
BARNSTABLE	$ 655,298
BERKSHIRE	675,457
BRISTOL	2,759,800
DUKES	19,889
ESSEX	3,068,929
FRANKLIN	228,041
HAMPDEN	2,931,987
HAMPSHIRE	391,753
MIDDLESEX	5,200,843
NANTUCKET	24,268
NORFOLK	1,591,281
PLYMOUTH	1,772,905
SUFFOLK	8,068,308
WORCESTER	2,962,803
Total	$30,351,562

TITLE I PROJECTS

Over 69% of the Title I projects in operation throughout Massachusetts during FY76 were conducted during the school year, while 30.2% were operated during the summer term. **(see table 2)** An overwhelming number of these projects (319) were conducted by individual Local Educational Agencies (LEAs). Fifteen programs were carried out in concert with other school districts.

TABLE 2

SCHOOL-YEAR AND SUMMER TITLE I PROJECTS
1975-1976

	Number	Percentage
School Year	233	69.8
Summer	101	30.2
TOTAL	**334**	**100.0**

STUDENT PARTICIPATION

During FY76, 68,261 children attending both public and non-public schools participated in Title I programs. Table 3 shows the unduplicated* count of these children. The greatest number, 63,545, were enrolled in pre-kindergarten—grade 6.

Figure 1 shows that 49.5% of the Title I population was in grades 1-3, 30.2% in grades 4-6, and only 5.7% in grades 7-12. In summary, it is apparent that the vast majority of the students participating in Title I were in grades 1-6.

*Students who participated in more than one project in an LEA are counted only *once*.

The unduplicated count of participating children enrolled in the public schools—60,164—represents approximately 88.1% of the total Title I population. **(see table 4)** Of these students, 63.1% were in pre-kindergarten, kindergarten, and grades 1-3, 29.6% in grades 4-6, and only 7.3% in grades 7-12 and in the Special Education, Drop Outs, or Other categories.

The unduplicated count of participating children enrolled in the non-public (parochial) schools was 8,097 students. **(see table 5)** Approximately 95.7% were in grades pre-kindergarten—6.

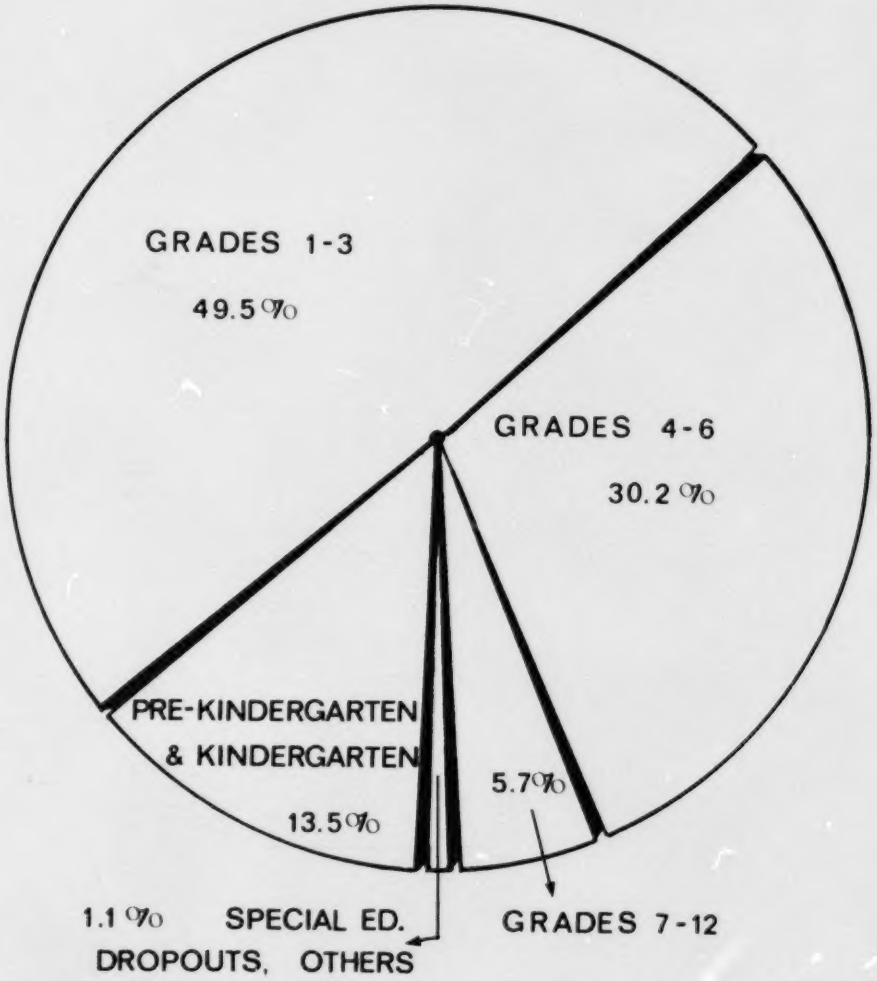
UNDUPLICATED COUNT OF PARTICIPATING CHILDREN

	TABLE 3 PUBLIC AND NON-PUBLIC COMBINED			TABLE 4 ENROLLED IN PUBLIC SCHOOLS			TABLE 5 ENROLLED IN NON-PUBLIC SCHOOLS		
	Number	Percentage	Cumulative Percentage	Number	Percentage	Cumulative Percentage	Number	Percentage	Cumulative Percentage
Pre-kindergarten	2,437	3.6	3.6	2,318	3.9	3.9	119	1.5	1.5
Kindergarten	6,745	9.9	13.5	6,476	10.8	14.7	269	3.3	4.8
Grades: 1	11,642	17.0	30.5	10,000	16.6	31.3	1,642	20.3	25.1
2	11,636	17.1	47.6	10,088	16.7	48.0	1,548	19.1	44.2
3	10,492	15.4	63.0	9,073	15.1	63.1	1,419	17.5	61.7
4	8,900	13.0	76.0	7,572	12.6	75.7	1,328	16.4	78.1
5	7,357	10.8	86.8	6,288	10.4	86.1	1,069	13.2	91.3
6	4,336	6.4	93.2	3,980	6.6	92.7	356	4.4	95.7
7	1,191	1.7	94.9	1,136	1.9	94.6	55	0.7	96.4
8	1,174	1.7	96.6	1,131	1.9	96.5	43	0.5	96.9
9	426	0.6	97.2	417	0.7	97.2	9	0.1	97.0
10	396	0.6	97.8	389	0.6	97.8	7	0.1	97.1
11	399	0.6	98.4	396	0.7	98.5	3	0.1	97.2
12	318	0.5	98.9	318	0.5	99.0	0	0.0	97.2
Special Education	118	0.2	99.1	34	0.05	99.05	84	1.0	98.2
Drop Outs	92	0.1	99.2	32	0.05	99.1	60	0.8	99.0
Other	602	0.8	100.0	516	0.9	100.0	86	1.0	100.0
TOTAL	**68,261**	**100.0**		**60,164**	**100.0**		**8,097**	**100.0**	

FIGURE 1

Unduplicated Count of Participating Children By Selected Grade Level Categories

Public & Non-Public Combined



PROJECT ACTIVITY AREAS

Student participation in each of the 19 major activity areas in which the 334 Title I projects were involved during FY76 is presented in Table 6. Clearly, reading stands out as the major activity area of Title I in Massachusetts, involving the greatest number of students (50,339). Mathematics emerged as the second most frequent activity in which Title I children participated. Other major activity areas in which over 8,500 children were involved include Cultural Enrichment (15,070 students), Physical Education and Recreation (14,876 students), and Social and Emotional Development (8,700 students).

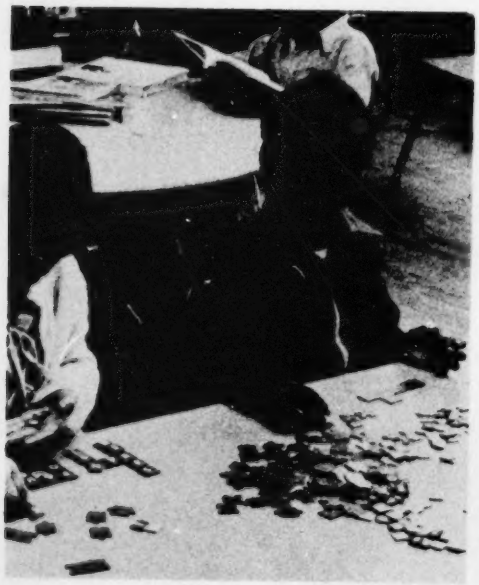
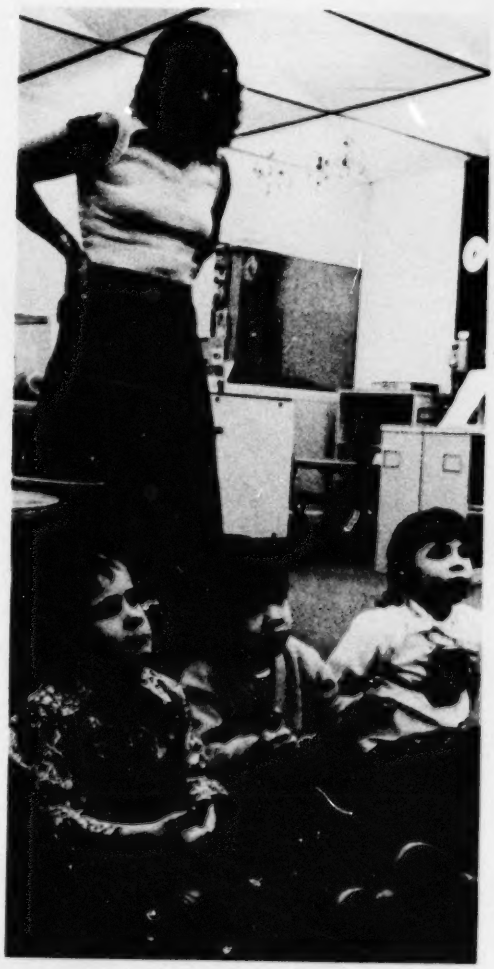


TABLE 6

MAJOR ACTIVITY AREAS OFFERED BY TITLE I PROJECTS

Project Activity	Total No. of Children Involved
Reading	50,339
Mathematics	23,053
Cultural Enrichment	15,070
Physical Education or Recreation	14,876
Social and Emotional Development	8,700
Other Language Arts	7,719
Other	7,571
Diagnosis of Learning or Emotional Problems	7,321
Food or Clothing Services	7,321
Crafts, Art, Music or Dramatics	6,484
Medical or Dental Services	4,949
English as a Second Language	3,679
Other Academic Areas	2,246
Speech and Hearing	1,790
Science	1,517
Social Studies	1,091
Industrial Arts	641
Home Economics	243
Business Education	118



TYPES OF STAFF

The types of Title I staff employed (salaried and non-salaried combined) is distinguished between full- and part-time positions in Table 7. A little more than one-fourth of the full-time staff were elementary teachers; about one-half were teacher aides. Of the part-time personnel, 24.3% were elementary teachers; 32.4% were teacher aides.

Figure 2 illustrates the salary status of both full- and part-time staff. More than 96.6% of the full-time Title I staff were salaried, about 76% of the part-time staff were salaried, and the combined percentage of full- and part-time salaried staff was more than 74.5%.

The types of staff in Title I projects (salaried and non-salaried combined) is depicted in Figure 3. Approximately 35.4% were classified as teachers, over 49% were aides, and the remaining were categorized as either administrators or specialists.

TABLE 7

TYPES OF STAFF IN TITLE I PROJECTS
SALARIED AND NON-SALARIED COMBINED

Staff	FULL-TIME Number	FULL-TIME Percentage	PART-TIME Number	PART-TIME Percentage	TOTAL Number	TOTAL Percentage
Pre-kindergarten Teachers	154	3.0	46	2.6	200	2.9
Kindergarten Teachers	158	3.0	38	2.1	196	2.8
Elementary Teachers	1,379	26.5	433	24.3	1,812	25.9
Secondary Teachers	178	3.4	30	1.7	208	3.0
Special Education Teachers	26	0.5	27	1.5	53	0.8
Reading Specialists	244	4.7	77	4.3	321	4.6
Speech Therapists	43	0.8	27	1.5	70	1.0
Librarians	13	0.2	13	0.7	26	0.4
Supervisors and Administrators	207	4.0	112	6.3	319	4.6
Counselors and Psychologists	129	2.5	62	3.5	191	2.7
Attendance and Social Workers	41	0.8	15	0.8	56	0.8
Physicians and Nurses	58	1.1	40	2.3	98	1.4
Teacher Aides	2,287	44.0	577	32.4	2,864	41.0
Library Aides	29	0.6	65	3.6	94	1.3
Others	256	4.9	220	12.4	476	6.8
TOTAL	**5,202**	**100.0**	**1,782**	**100.0**	**6,984**	**100.0**

FIGURE 2

SALARY STATUS OF TITLE I STAFF

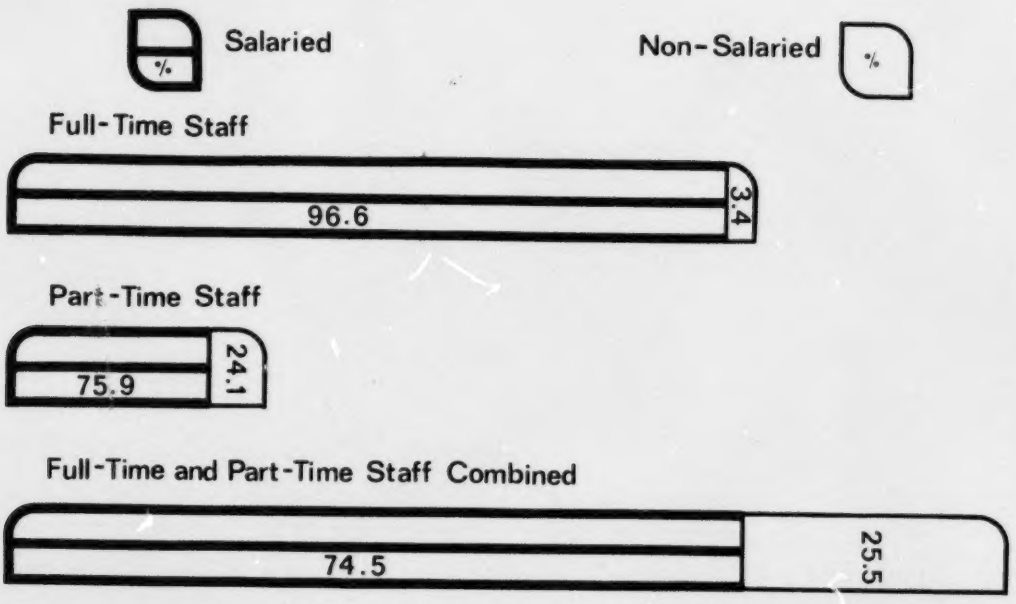
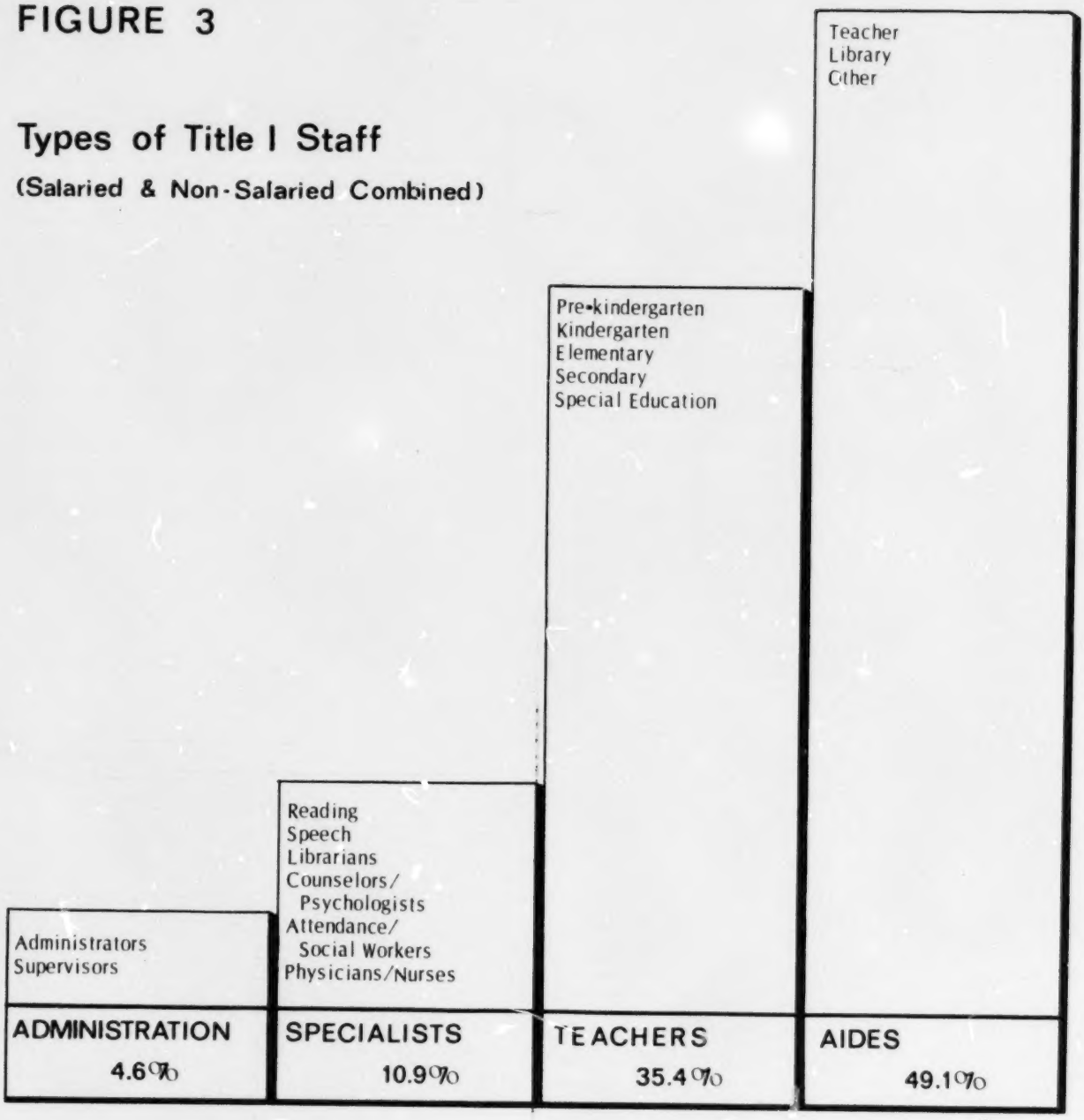


FIGURE 3

Types of Title I Staff

(Salaried & Non-Salaried Combined)



Non-Public School Participation

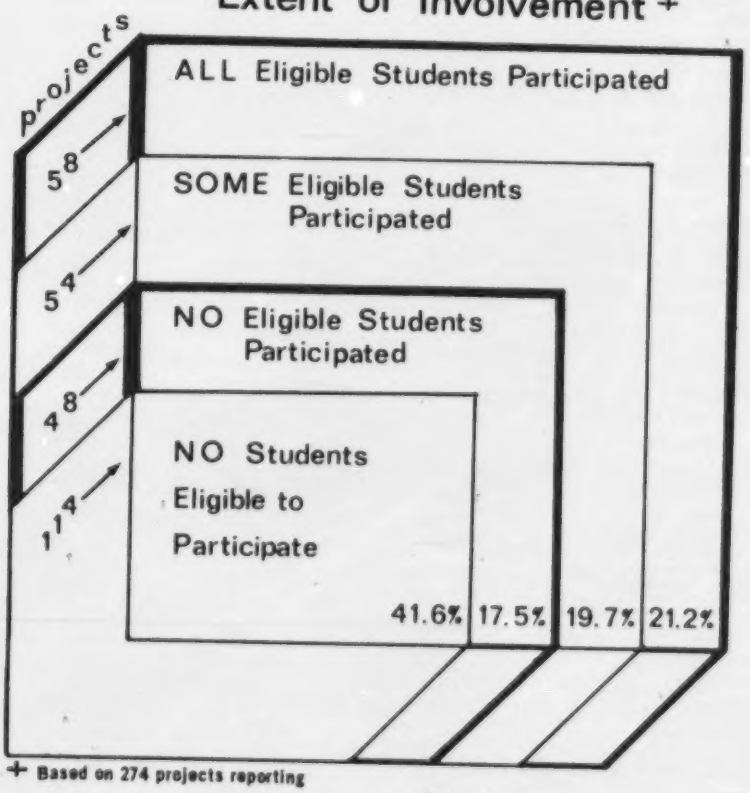
GUIDELINES FOR NON-PUBLIC SCHOOL PARTICIPATION

According to the United States Office of Education guidelines, public school authorities are required to provide non-public school children with opportunities to share the funded services available to public school children under the following regulations:

1. If the non-public school's educationally deprived children reside in an eligible public school attendance area.
2. If the Title I services had not been provided previously by the private or parochial school, and
3. If the nature and extent of the disadvantaged non-public school children's educational needs could logically be satisfied by the kind of educational services to be given to the public school children.

FIGURE 4

Non-Public School Student Participation
Extent of Involvement +



+ Based on 274 projects reporting

NON-PUBLIC SCHOOL STUDENT PARTICIPATION

Shown in Figure 4 is the extent of participation of non-public school students in Title I projects. Of the 274 projects reporting, 54 (19.7%) indicated that some eligible non-public school students took part in their Title I projects. Non-public school children actually participated in 112 Title I projects, 70% of the projects for which they were eligible.

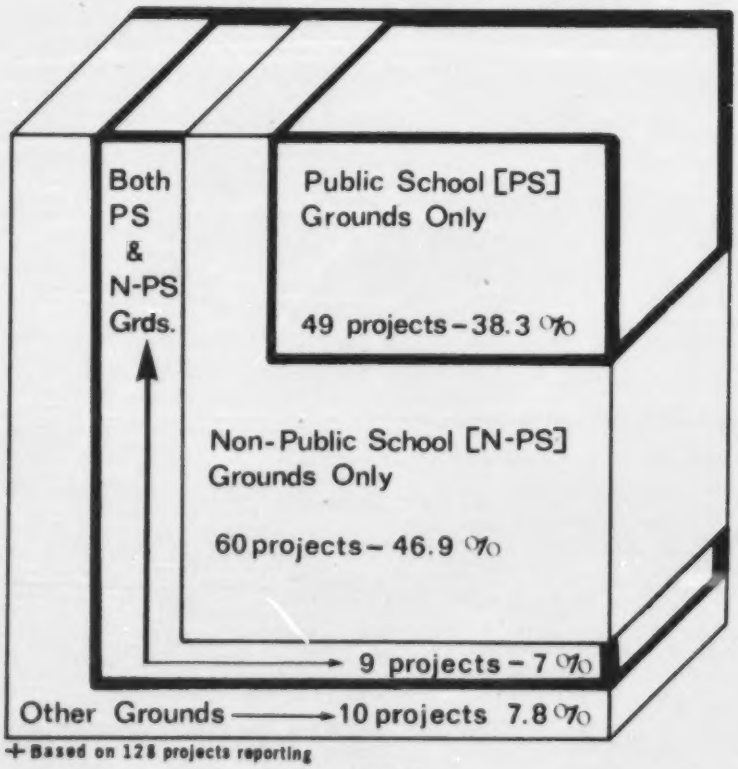
Information relative to non-public school student participation according to project location is provided in Figure 5. More than a third of the 128 projects (38.3%) attended by non-public school children took place on public school grounds, 60 projects (46.9%) on non-public school grounds, 7% on public and non-public grounds, and 7.8% at other locations.

Of the 117 projects reporting, 109 (93.2%) indicated that non-public school students began participation in a Title I project at the beginning, the same time as the public school children. **(see table 8)**

Of the 124 projects reporting non-public school student participation, 111 (89.5%) noted that non-public school activities took place during the regular or summer school day. Only 1 (.8%) reported that project activities took place after or before the regular or summer school day, and 12 (9.7%) took place on weekends and at other designated times. **(see table 9)**

FIGURE 5

Non-Public School Student Participation According to Project Location+


Both PS & N-PS Grds.
Public School [PS] Grounds Only
49 projects – 38.3 %
Non-Public School [N-PS] Grounds Only
60 projects – 46.9 %
9 projects – 7 %
Other Grounds
10 projects 7.8 %

+ Based on 128 projects reporting

TABLE 8

NON-PUBLIC SCHOOL STUDENT PARTICIPATION
TIME PROJECT PARTICIPATION BEGAN

	Number of Projects	Percentage
At the beginning of the project (same time as the public school children)	109	93.2
Near the beginning of the project (later than the public school children)	8	6.8
About halfway through the project	0	.0
More than halfway through the project	0	.0
TOTAL	**117**	**100.0**

TABLE 9

NON-PUBLIC SCHOOL STUDENT PARTICIPATION
TIME OF DAY PROJECTS BEGAN

	Number of Projects	Percentage
During the regular or summer school day	111	89.5
After the regular or summer school day	1	0.8
Before the regular or summer school day	0	0.0
On weekends	2	1.6
Other	10	8.1
TOTAL	**124**	**100.0**

INVOLVEMENT OF NON-PUBLIC SCHOOL REPRESENTATIVES

The major activities and extent of involvement of non-public school representatives in Title I are depicted in Table 10. A majority of Title I projects reported that non-public school representatives participated in planning the project design of 111 projects. The second area of greatest participation was in evaluation (79 projects). Sixty-three projects reported that non-public school representatives helped in planning curriculum and materials.

TABLE 10

PARTICIPATION IN TITLE I PROJECTS OF
NON-PUBLIC SCHOOL REPRESENTATIVES

Type of Activity	Number of Projects Involved
Planning Project Design	111
Evaluation	79
Planning Curriculum and Materials	63
Project Instruction and Services	59
Other	45
Staff Training	33
TOTAL	**390**

Staff Training

FUNDING OF TRAINING PROGRAMS

Of the 277 training programs offered to Title I staff by funding sources during FY76, 114 programs (41.2%) used Title I monies for staff development, while 58 training programs (20.9%) were funded by the LEAs. Another 58 (20.9%) indicated that staff training programs were jointly financed by Title I and the LEAs. **(see table 11)**

TABLE 11

PROJECTS OPERATING STAFF TRAINING PROGRAMS

	Number of Projects	Percentage
Title I Funded	114	41.2
Funded by School System	58	20.9
Funded Jointly by Title I and School System	58	20.9
No Training Program, but Staff Training Provided During Previous Project Year	24	8.7
Other	23	8.3
TOTAL	**277**	**100.0**

PROFESSIONAL AND NON-PROFESSIONAL STAFF PARTICIPATION

A description of the types of staff for whom the training programs were conducted and the actual numbers of staff members who received training are presented in Tables 12 and 13.

A total of 68 Title I projects conducted training for teachers and professional staff only, while 20 projects provided training for teacher aides only. Forty-eight percent of the projects conducted joint training sessions for both teachers and teacher aides.

TABLE 12

TYPES OF STAFF-PROVIDED TRAINING

Types of Staff	Number of Projects	Percentage
Teachers and Teacher Aides *Jointly*	129	48.0
Teachers and Professional Staff Only	68	25.3
Teachers and Teacher Aides *Separately*	35	13.0
Teacher Aides Only	20	7.4
Other	17	6.3
TOTAL	**269**	**100.0**

TABLE 13

NUMBER OF STAFF MEMBERS WHO RECEIVED TRAINING

Types of Staff	Number of Staff Members	Percentage
Teacher Aides and Other Non-Professional Staff	2,789	46.0
Teachers and Other Professional Staff	3,274	54.0
TOTAL	**6,063**	**100.0**

As shown in Table 13, a total of 6,063 Title I staff members participated in staff development sessions. Of this total, 46% were teachers and other professional staff, and 54% were teacher aides and other non-professional staff members.

Approximately seven out of ten of the sessions were conducted prior to and during the project operation. A few were conducted during the project. Table 14 indicates when training sessions took place.

The intensity of Title I training programs is summarized in Figure 6. Seventy-four projects indicated that their training sessions operated 1-5 hours; 71 projects reported that sessions operated 6-10 hours; and 36 projects noted that sessions were held for 11-15 hours.

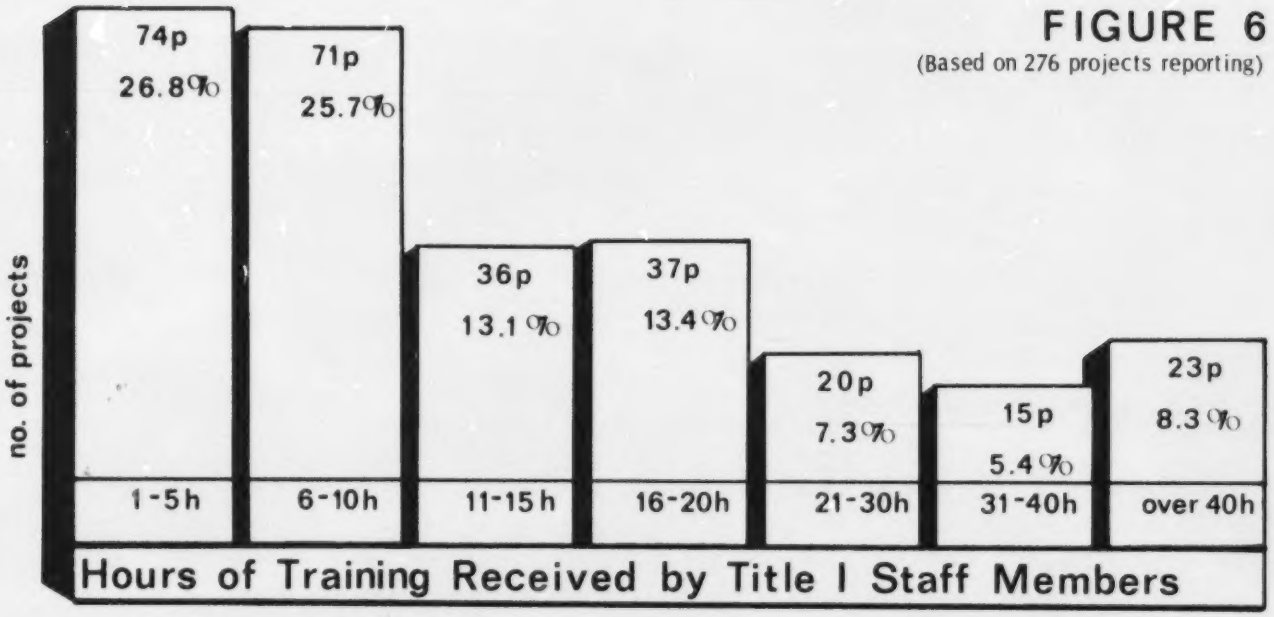
TABLE 14

TIME OF STAFF TRAINING

Time	Number of Sessions	Percentage
Prior to *and* During Project	179	66.3
During the Project Only	63	23.3
Prior to Project Only	27	10.0
Other	1	0.4
TOTAL	**270**	**100.0**

FIGURE 6

(Based on 276 projects reporting)



PERSONNEL CONDUCTING STAFF TRAINING

Table 15 reports the types of personnel used to conduct staff training. Title I Project Directors were responsible for conducting 82.2% of the sessions; 56.9% of the programs reported that their local teachers and staff specialists conducted staff training sessions; and 26.5% of the programs noted that specialists from colleges and universities assisted with staff training.

TABLE 15

PERSONNEL CONDUCTING STAFF TRAINING*

Type of Personnel	Number of Projects	Percentage
Project Director	227	82.2
Local teachers and Staff Specialists	157	56.9
Specialists from Colleges and Universities	73	26.5
Specialists from Industry and/or the Arts	12	4.3
Specialists in Medical and Psychological Services	45	16.3
Others	33	12.0

*Based on 276 projects reporting

TOPICS COVERED IN TRAINING PROGRAM

The major topics covered in the training sessions are presented in Tables 16 and 17. The most common topic for professionals and non-professionals was orientation to the Title I project. More than 59% of the projects reporting indicated that the use of equipment and materials and the use and duties of teacher aides were the major topics for professional staff.

MAJOR TOPICS OF TITLE I STAFF TRAINING PROGRAMS*

	TABLE 16 PROFESSIONAL STAFF		TABLE 17 TEACHER AIDE AND NON-PROFESSIONAL STAFF	
	Number of Projects	Percentage	Number of Projects	Percentage
Orientation to Title I Project	193	70.0	224	81.2
Use of equipment and materials	170	61.6	186	67.4
Use and duties of teacher aides	163	59.1	149	54.0
Subject matter areas	156	56.5	204	73.9
Development of curriculum and teaching materials	115	41.7	204	73.9
Measurement, evaluation, and reporting	112	40.6	193	69.9
Project planning and design	80	29.0	166	60.1
Use of supportive services (counseling, medical, etc.)	63	22.8	118	42.8
Culture and psychology of the educationally disadvantaged	45	16.3	66	23.9
Diagnosis of learning disabilities	44	15.9	93	33.7
Other	24	8.7	15	5.4

*Based on 276 projects reporting

Community and Parent Involvement

TITLE I PARENT ADVISORY COUNCIL

Over 97% of the 288 projects responding indicated that they had an active Title I Parent Advisory Council (PAC) during FY76. One hundred eighty-seven indicated that their PAC had served more than one Title I project, while 94 revealed that their councils assisted in the operation of only one project.

VOTING MEMBERSHIP OF PAC

In over three-quarters of all the projects (76%), the voting membership of the councils were parents. Of those reporting, 87.8% (253) reported that *all* the parents who were voting members in the PAC were parents of children involved in the 1975-76 school year Title I project or of children involved in the 1976 summer project. Over 7% of the projects (22) indicated that other parents were voting members in the council. Furthermore, of the 288 projects contributing data, 78.5% (226) reported that PACs were being planned for each Title I school. It was reported that there were 3,914 active PAC members during FY76.

PROJECT ACTIVITY AREAS

Title I directors were asked to rank-order the activities in which their PACs participated according to the effort expended on each activity. For each project, the activities receiving ranks of 1, 2, 3, or 4 were tabulated to establish the order presented in Table 18. The PACs spent a great deal of their time recommending direction for each specific project in the total program and identifying the needs of children to be served.

NON-VOTING MEMBERSHIP OF PAC

The composition of the non-voting membership of the PACs is shown in Table 19. Two hundred sixteen public school administrators, 140 public school teachers, and 136 parents of public school children served by Title I made up the majority of non-voting membership. Seven Title I projects reported that students were non-voting members.

TABLE 18

RANK OF ADVISORY COUNCIL ACTIVITY IN ORDER OF EFFORT COUNCIL DEVOTED TO EACH ACTIVITY*

Rank	Activity	Total Number of Projects Assigning Ranks
1	Recommending direction for this specific project in the total program	249
2	Identifying the needs of children to be served	221
3	Reviewing project plans developed by the school	205
4	Recommending direction for the overall Title I effort in the district	181
5	Evaluating existing projects	153
6	Initiating specific plans for the project's activities	92
7	Disseminating information on Title I activities	74
8	Mobilizing personnel and community resources (teacher aides, volunteers, service agencies, etc.)	43
9	Participating in personnel policy	9
10	Other	6

*Based on 288 Projects reporting

TABLE 19

NON-VOTING MEMBERSHIP OF TITLE I ADVISORY COUNCILS*

Type of Member	Number of Projects	Percentage
Public School Administrators	216	75.0
Public School Teachers	140	48.6
Parents of Public School Children Served by Title I	136	47.2
Parents of Public School Children Not Served by Title I	67	23.3
Non-Public School Administrators	60	20.8
Parents of Non-Public School Children Not Served by Title I	56	19.4
School Committee Members	33	11.5
Non-Public School Teachers	33	11.5
Anti-Poverty Program Representatives	29	10.1
Parents of Non-Public School Children Served by Title I	19	6.6
Service Club Representatives	13	4.5
Other	13	4.5
Students	7	2.4

*Based on 288 Projects reporting

Effect on Educational Achievement

OVERVIEW

The effects of Massachusetts Title I programs upon reading and arithmetic achievement are presented in this section. Discussion is based principally upon the analysis of achievement scores from standardized tests administered at or near the beginning and end of the programs.

The achievement data reported by the projects impose several limitations on conclusions drawn about the educational achievement of Title I program participants. Since no uniform statewide testing program exists, scores reported in the annual Title I report vary in number and type. Some projects did not administer standardized tests; other non-standardized tests served as their criterion measures. While the great majority of projects reported some evaluative data, some projects did not report all of their data in a form amenable to the kind of analysis used in this report.

The achievement data used in this report were derived from the Title I projects that included reading as a major activity and from the projects that included arithmetic as a major activity. Table 20 accounts for those projects reporting pre- and post-measures (Total Score) from standardized achievement criteria only. The total 52,821 students represents over 87.9% of the unduplicated count of Title I participants.

TABLE 20

SOURCES OF ACHIEVEMENT

Number of Participants Tested School Year 1975-1976	
Reading	42,490
Arithmetic	10,431
Total	52,921

ANALYSIS OF ACHIEVEMENT DATA

Standardized achievement tests were administered in the majority of both summer and school year projects. Those tests mainly employed to assess achievement in reading and arithmetic included the *Stanford Achievement Test, Metropolitan Achievement Test, California Achievement Test, Gates-MacGinitie Test, and Iowa Tests of Basic Skills.*

The usable test results from all cities and towns were divided by subtest and grade level. Gain rates were computed by comparing the gain in the grade equivalent score to the number of months of participation in a program. Average gain rates for all programs using a particular test were computed for each grade level on each subtest.

It is important to point out that the gross actual gain in grade-equivalent score (i.e. the difference between pre- and post-test means shown in the tables) does *not* necessarily reflect the length of programs or the total gains which may have been made over the length of programs. For the most part, the period between pre- and post-testing was less than the time between the actual beginning and end of the program. The monthly gain rate, therefore, provides a more meaningful index of the program's effectiveness. The difference between the grade-equivalent scores divided by the number of months between pre- and post-testing yields an index of monthly gain rate. *(For example:* If a pupil gained three months in Grade Equivalent (G.E.) score in three months, his gain rate index would be 1.0; that is, he would have gained at the rate of one month for every month's participation in the program.)

$$\frac{\text{Gain in grade equivalent score (pre- \& post-test difference)}}{\text{No./Mos./participation in a program}} = \text{MONTHLY GAIN RATE}$$

$$\frac{+3.0 \text{ G.E. score}}{3 \text{ months in program}} = 1.0 \text{ gain rate index}$$

The obtained gain rate between pre- and post-testing can be compared to the average rate of gain of 0.7 generally cited for disadvantaged children.

For convenience of interpretation and to provide an overview of test results across the Commonwealth, Total Reading and Total Arithmetic scores from the different tests were grouped for analysis. It is recognized that the results of these tests are not directly comparable. However, it is felt that the groupings do meaningfully depict the trends in reading and arithmetic achievement shown in the separate test analysis.

READING ACHIEVEMENT

School Year Projects

The reading achievement of the Title I participants in school year programs is discussed in this section. The Total Reading achievement for 42,490 students in grades 1-8, represented by pre- and post-grade equivalent means and the average gain rates achieved, is summarized in Table 21. All scores increased at post-test time, and the average monthly gain rates of the eight grade levels were 1.1 or better in G.E. scores for each month in the program. This gain rate is slightly above the 1.0 monthly gain rate commonly established by test publishers for an average non-Title I child.

Figure 7 presents program gain rates graphically, comparing program gain rates for grades 1—8 to a national average rate and a gain rate cited for disadvantaged children.

FIGURE 7

TOTAL READING

Gain Rates in Grade Equivalent Score

School Year Programs

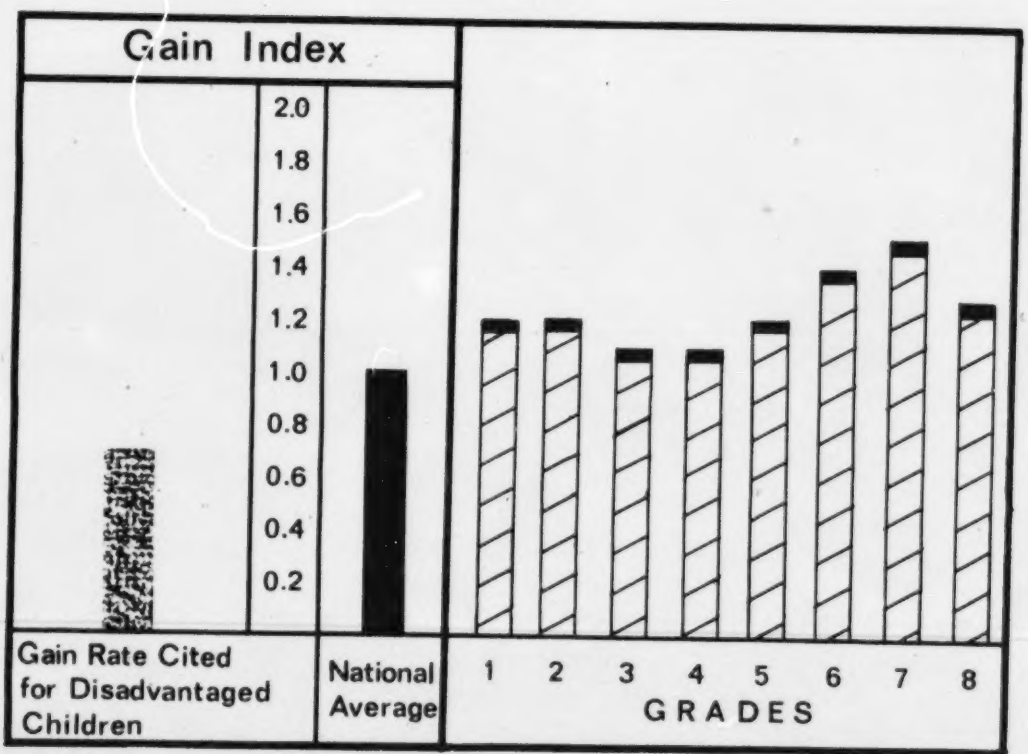


TABLE 21

READING ACHIEVEMENT—SCHOOL YEAR PROJECTS

TOTAL READING SCORES*

Grade	Number of Programs	Number of Participants	Grade Equivalent Pre-Test Mean	Grade Equivalent Post-Test Mean	Average Monthly Gain Rate
1	105	2,424	1.2	1.9	1.2
2	213	9,672	1.7	2.5	1.2
3	235	9,305	2.4	3.1	1.1
4	211	8,452	3.0	3.7	1.1
5	140	6,858	3.5	4.4	1.2
6	112	3,882	4.2	5.2	1.4
7	24	1,217	4.4	5.3	1.5
8	18	679	5.0	5.8	1.3

*Total Reading Scores are from the Gates-MacGinitie Reading Test, Iowa Test of Basic Skills, Durrell—Listening-Reading Series, Stanford Achievement Test, Wide Range Achievement Test, Lee-Clark Reading Readiness Test, Botel Reading Inventory, California Reading Test, Scholastic Diagnostic Test, Rutgers University Reading Center Test, Primary Reading Profiles, and the Metropolitan Achievement Test.

ARITHMETIC ACHIEVEMENT

School Year Projects

The following discussion is based on the results of the arithmetic achievement of the Title I participants in school year programs. Table 22 summarizes the Total Arithmetic achievement for the 10,431 students in grades 1-8 represented by pre- and post-grade equivalent means and the average gain rates achieved. For grades 1-8, all scores increased dramatically at post-test time and the monthly gain rates far exceeded the national norm of 1.0 month's gain for each month in the program.

Figure 8 presents program gain rates graphically, comparing program gain rates for grades 1-8 to projected rates for national norms and disadvantaged children. The large gains for these grades can be readily observed.

FIGURE 8

TOTAL ARITHMETIC

Gain Rates in Grade Equivalent Score
School Year Programs

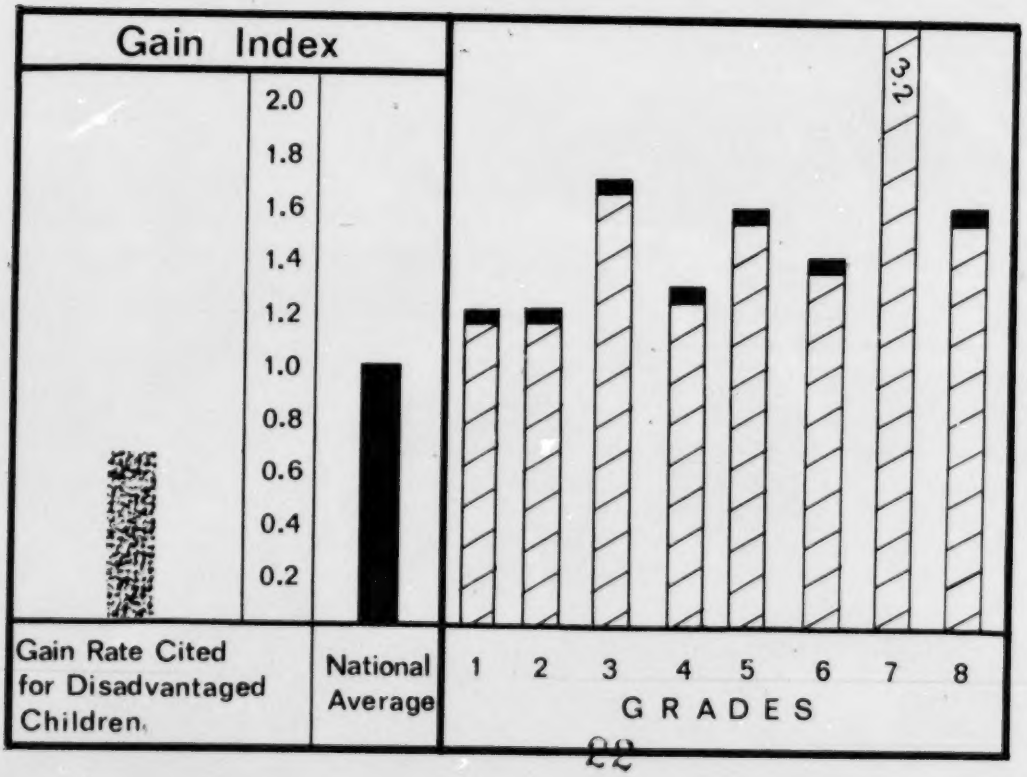


TABLE 22

ARITHMETIC ACHIEVEMENT—SCHOOL YEAR PROJECTS

TOTAL ARITHMETIC SCORES*

Grade	Number of Programs	Number of Participants	Grade Equivalent Pre-Test Mean	Grade Equivalent Post-Test Mean	Average Monthly Gain Rate
1	35	596	1.1	1.9	1.2
2	67	2,355	1.7	2.6	1.2
3	76	2,719	2.4	3.4	1.7
4	64	1,746	3.2	4.1	1.3
5	55	1,571	3.9	4.9	1.6
6	42	1,007	4.8	5.8	1.4
7	6	124	6.1	7.0	3.2
8	8	313	7.7	8.7	1.6

*Total Arithmetic Scores are from the Wide Range Achievement Test, Stanford Achievement Test, Metropolitan Achievement Test, SRA Achievement Series, Iowa Test of Basic Skills, California Achievement Test, Wide Range Achievement Test, Bobbs-Merrill Achievement Test, and the Key Math Diagnostic Test.